TITLE: CLOTHES DRYER WITH CONTROL PANEL SEAL

BACKGROUND OF THE INVENTION

Clothes dryers, and other household appliances include a drying space or internal working space inside a cabinet, with a door to provide access to the internal area. The appliance typically includes a control panel with exterior buttons for controlling operation of the appliance after the door is closed. The door typically includes a seal for sealingly engaging a portion of the housing around the access opening so as to preclude leakage of moisture and/or hot air during operation of the appliance. The control panel typically is spaced apart from the door to preclude exposure to moisture. More particularly, clothes dryers have sealing doors which preclude escape of both hot air and moisture driven from the wet clothes being dried. The seal typically is mounted on the interior of the dryer door and engages a flange or other surface surrounding the access opening. Such door seals are conventionally found on both tumble dryers and cabinet dryers. In the design of such dryers, and other appliances, the location of the control panel is important so as to preclude any detrimental effects from moisture or air temperatures.

Accordingly, a primary objective of the present invention is the provision of an improved appliance having a seal between the appliance door and the control panel.

Another objective of the present invention is the provision of an appliance control panel having an upstanding surface for sealing with a seal of the appliance door.

Still another objective of the present invention is the provision of a combination tumble and cabinet dryer having doors which sealingly engage with the control panel.

Still another objective of the present invention is the provision of a clothes dryer with a door having a lip to direct condensation away from the control panel.

A further objective of the present invention is the provision of a clothes dryer having a seal and a moisture-directing lip which protect the control panel from exposure to moisture.

These and other objectives will become apparent from the following description of the invention.

SUMMARY OF THE INVENTION

A combination tumble and cabinet clothes dryer includes a housing, with a tumble dryer mounted in the housing, and a cabinet dryer built into the housing. A tumbler door provides access to the tumble dryer, while a pair of French-style cabinet doors provide access to the cabinet dryer. A control panel is mounted on the housing between the tumble dryer and the cabinet dryer to control operation of the dryers. A seal on each of the cabinet doors sealingly engages with an upright surface on the control panel when the cabinet doors are closed to prevent migration of moisture to the control panel. The cabinet doors also include a sloped inner surface with a lip to direct condensation away from the seal.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a front view of the combination tumble and cabinet dryer of the present invention, with the doors closed.

Figure 2 is an enlarged view showing the doors of the cabinet dryer open.

Figure 3 is an enlarged sectional view taken along lines 3-3 of Figure 1 and showing the seal and condensation lip of the present invention.

DETAILED DESCRIPTION OF THE DRAWINGS

Figure 1 shows a combination dryer 10 having a tumble dryer 12 in the lower portion thereof and a cabinet dryer 14 in the upper portion thereof. The general structure of the dryer 10 is described in applicants co-pending application Serial 10/406,814 to Johnson, et al, filed on April 4, 2003 and entitled COMBINATION TUMBLE AND CABINET DRYER. The tumble dryer 12 includes a door 16 pivotally hinged to the housing 18 to provide access to the rotatable drum (not shown) within the tumble dryer 12. A pair of French-style doors 20 are also mounted to the housing 18 to provide access to the interior of the cabinet dryer 14.

A control panel 22 is mounted on the housing 18 between the tumble dryer 12 and the cabinet dryer 14. The control panel 22 controls the operation of both the tumble dryer 12 and the cabinet dryer 14.

The present invention is directed, in part, towards the seal between the cabinet doors 20 and the control panel 22. More particularly, as seen in Figure 3, a seal 24 is mounted on the lower edge of the doors 20. While the drawings show the seal 24 to be a bulb-type seal, other types of seals may also be utilized. The control panel 22 includes an upright surface 26 which is adapted to sealingly engage with the seal 24 when the doors 20 are closed. The seal 24, when engaged with the surface 26, prevents moisture from migrating outwardly in the space 28 between the doors 20 and the control panel 22.

The doors 20 include conventional seals extending along opposite sides and at the top of the doors to provide sealing engagement with the housing 18, as is well known in the art. The door 16 of the tumble dryer 12 also includes a conventional seal (not shown).

The inner surface of the doors 20 also include an inwardly sloped lower wall 30 terminating in a lip 32, as best seen in Figure 3. The sloped wall 30 and lip 32 direct condensation away from the seal 24. Thus, the seal 24 and the lip 32 on the doors 20 function to direct moisture driven from the clothes dried in the cabinet dryer away from the control panel 22.

The control panel 22 has a back panel 34 that also serves as an interior surface of the cabinet dryer 14.

Whereas the invention has been shown and described in connection with the preferred embodiment thereof, it will be understood that any modifications, substitutions, and additions may be made which are within the intended broad scope of the following claims. From the foregoing, it can be seen that the present invention accomplishes at least all of the stated objectives.